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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,257	09/30/2002	Murali Narasimha	U01-0078(19)	5663
24239	7590	01/13/2005	EXAMINER	
MOORE & VAN ALLEN PLLC P.O. BOX 13706 Research Triangle Park, NC 27709			ADDY, ANTHONY S	
			ART UNIT	PAPER NUMBER

2681

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,257

Applicant(s)

NARASIMHA ET AL.

Examiner

Anthony S Addy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/30/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/30/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4,10-16,18,21,23-27 and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by **Cooper, U.S. Publication Number 2004/0203745 A1 (hereinafter Cooper)**.

Regarding claim 1, Cooper discloses a method of selecting a communication system (see paragraph 0010, lines 1-19), comprising: receiving at least a quality indicator for a channel (see paragraph 0011, lines 15-27); scanning any channels on a channel scan list in response to at least the quality indicator of the channel being below a predetermined threshold value (see paragraph 0036, lines 1-27); and acquiring another channel from the channel scan list in response to the other channel having at least the quality indicator greater than or equal to the predetermined threshold value (see paragraph 0038, line 1 through paragraph 0040, line 11 and Figures 5 & 6).

Regarding claim 11, Cooper teaches all the limitations of claim 1. In addition, Cooper teaches a method, further comprising building the channel scan

list, wherein the channel scan list includes channels on alternate systems (see paragraph 0025, line 1 through paragraph 0026, line 25).

Regarding claim 12, Cooper teaches all the limitations of claim 1. In addition, Cooper teaches a method, further comprising removing a channel from a grey zone channel list after the channel has been in the grey zone channel list for a predetermined period of time (see paragraph 0012, lines 1-15).

Regarding claim 13, Cooper teaches all the limitations of claim 1. In addition, Cooper teaches a method, wherein scanning any channels in the channel scan list comprises performing a microscan of any channels on a grey zone channel list (see paragraph 0036, lines 1-27 and paragraph 0039, lines 1-28).

Regarding claim 14, Cooper teaches all the limitations of claim 1. In addition, Cooper teaches a method, wherein performing a microscan comprises: receiving a received signal strength indication (RSSI) for a channel in the grey zone channel list; and comparing the RSSI to one of a threshold value or a previously received RSSI for the channel (see paragraph 0036, lines 1-27 and paragraph 0039, lines 1-28).

Regarding claim 15, Cooper teaches all the limitations of claim 1 and it is inherent that Cooper teaches a method, further comprising programming the predetermined threshold value over-the-air (see Figures 1 and 2; where a mobile station 2 has an antenna 86 and transceiver 84 for communicating with a plurality of base stations and network).

Regarding claim 16, Cooper discloses a method of selecting a communication system (see paragraph 0010, lines 1-19), comprising: monitoring an E C /I O of a CDMA pilot channel (see paragraph 0011, lines 15-27 and paragraph 0037, lines 1-13); and scanning any channels on a channel scan list to acquire another communication system in response to the E C /I O of the CDMA pilot channel remaining below a predetermined threshold for a predetermined period of time (see paragraph 0037, line 1 through paragraph 0040, line 11 and Figures 5 & 6).

Regarding claim 18, Cooper teaches all the limitations of claim 16. In addition, Cooper teaches a method, further comprising: receiving a first E C /I O of the CDMA pilot channel below a grey zone threshold value; and receiving another EC /I O of the CDMA pilot channel below the grey zone threshold value after the predetermined period of time and before scanning any channels in the channel scan list to acquire another communication system (see paragraph 0036, line 1 through paragraph 0039, line 28).

Regarding claims 3 and 21, Cooper teaches all the limitations of claims 1 and 16. In addition, Cooper teaches a method, wherein scanning any channels in the channel scan list comprises skipping any channels on a grey zone channel list (see paragraph 0011, line 8 through paragraph 0012, line 15 and paragraph 0025, line 1 through paragraph 0026, line 25).

Regarding claim 23, Cooper discloses a communication device, comprising: a receiver to receive at least a quality indicator for a channel (see paragraph 0027, lines 1-8 and Fig. 2); a channel scan list (see paragraph 0025,

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lines 1-17 and Fig. 1; where a mobile station 2 including a preferred roaming list 10 is shown); and a microprocessor adapted to cause scanning of any channels on the channel scan list in response to at least the quality indicator of the channel being below a predetermined threshold value (see paragraph 0011, line 1 through paragraph 0012, line 15, paragraph 0027, line 1 through paragraph 0029, line 13 and Fig. 2).

Regarding claim 30, Cooper discloses a computer-readable medium having computer-executable instructions for performing a method see paragraph 0011, lines 1-27 and paragraph 0027, lines 1-14), comprising: receiving at least a quality indicator for a channel (see paragraph 0011, lines 15-27); scanning any channels on a channel scan list in response to at least the quality indicator of the channel being below a predetermined threshold value (see paragraph 0036, lines 1-27); and acquiring another channel from the channel scan list in response to the other channel having at least the quality indicator greater than or equal to the predetermined threshold value (see paragraph 0038, line 1 through paragraph 0040, line 11 and Figures 5 & 6).

Regarding claims 4 and 32, Cooper teaches all the limitations of claims 1 and 30. In addition, Cooper teaches a computer-readable medium and method, wherein any channels in the channel scan list comprises: scanning at least channels in a preferred roaming list; and skipping any channels on a grey zone channel list (see paragraph 0011, line 8 through paragraph 0012, line 15 and paragraph 0025, line 1 through paragraph 0026, line 25).

Regarding claims 2, 25 and 31, Cooper teaches all the limitations of claims 1, 23 and 30. In addition, Cooper teaches a method, communication device and computer-readable medium having computer-executable instructions, wherein at least the quality indicator comprises an E C /1 0 of a code division multiple access (CDMA) pilot channel (see paragraph 0037, lines 1-13).

Regarding claim 10, Cooper teaches all the limitations of claim 1. In addition, Cooper teaches a method, wherein acquiring the other channel comprises acquiring one of a CDMA channel or an Advanced Mobile Phone Service (AMPS) channel (see paragraph 0011, lines 1-8).

Regarding claim 24, Cooper teaches all the limitations of claim 23. In addition, Cooper teaches a communication device, wherein the microprocessor is adapted to acquire another channel from the channel scan list in response to the other channel having at least a quality indicator greater than or equal to the predetermined threshold value (see paragraph 0036, line 1 through paragraph 0040, line 7).

Regarding claim 26, Cooper teaches all the limitations of claim 23. In addition, Cooper teaches a communication device, further comprising a memory coupled to the microprocessor, wherein the memory includes a grey zone channel list (see paragraph 0025, lines 1-17 and Fig. 2)

Regarding claim 27, Cooper teaches all the limitations of claim 23. In addition, Cooper teaches a communication device, wherein the channel scan list comprises a preferred roaming list (see paragraph 0025, lines 1-17).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6, 19-20 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cooper, U.S. Publication Number 2004/0203745 A1 (hereinafter Cooper)** as applied to claims 1,16,23 and 30 above, and further in view of **Hirose et al., U.S. Patent Number 6,064,890 (hereinafter Hirose)**.

Regarding claims 5 and 33, Cooper teaches all the limitations of claims 1 and 30. Cooper, however, fails to explicitly teach a computer-readable medium and method, further comprising: receiving at least another quality indicator after a predetermined time period before scanning any channels in the channel scan list; and scanning any channels in the channel scan list in response to the at least other quality indicator being below the predetermined threshold value.

Hirose, however, teaches a computer-readable medium and method, further comprising: measuring a first RSSI measurement P1, second, third and fourth RSSI measurements (P2, P3, and P4) (see col. 17, lines 1-6). The different RSSI measurements are then used to determine a change level, which shows whether the signal quality for the base station in question is on the increase or on the decrease (see col. 17, lines 7-11 and Fig. 20). Hirose further teaches the peripheral base station table updating unit rearranges the content of

the peripheral base station table into descending order of signal quality, based on the information stored in the peripheral base station table and on the measurement judging result including the change level in RSSI reported by the change calculating unit (see col. 17, lines 11-24 and Fig. 20). According to Hirose, when instructed by the base station switching judging unit to select a base station, the increase base station selection unit refers to the information stored in the peripheral base station table and selects the base station with the highest quality signal, before comparing the signal quality of the selected base station with a predetermined threshold (see col. 17, lines 24-35). Hirose further teaches when the signal quality of the selected base station is equal to or below the second threshold, the change levels stored in the peripheral base station table are compared for different base stations and a base station with the most marked increase in the thirty measured samples is selected, with the base station selection unit informing the base station switching unit of this newly selected base station.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with Hirose to include a computer-readable medium and method, further comprising: receiving at least another quality indicator after a predetermined time period before scanning any channels in the channel scan list; and scanning any channels in the channel scan list in response to the at least other quality indicator being below the predetermined threshold value and thus allow a mobile communication apparatus to measure the signal quality of each radio channel assigned to a plurality of base stations and

determine a base station to be used in communication based on a measuring result.

Regarding claims 6, 19 and 34, the combination of Cooper and Hirose teaches all the limitations of claims 5, 19 and 30. Cooper, however, fails to explicitly teach a computer-readable medium and method, further comprising: adding the channel to a grey zone channel list in response to receiving at least the other quality indicator signal below the predetermined threshold value.

Hirose, however, teaches a computer-readable medium and method, further comprising: adding a base station to a measured or non-measured table when at least one of the RSSI and the QI received is equal to or below its respective threshold (see col. 15, lines 20-49, col. 16, lines 31-40 and Fig. 12, steps 11-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with Hirose to include a computer-readable medium and method, further comprising: adding the channel to a grey zone channel list in response to receiving at least the other quality indicator signal below the predetermined threshold value, thus enable the mobile communication apparatus account for locations with poor signal reception and switch to an alternate system capable of offering a substantially better grade of service.

Regarding claim 20, the combination of Cooper and Hirose teaches all the limitations of claim 19. Cooper further teaches a method, further comprising removing the CDMA pilot channel from the grey zone channel list after the CDMA

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pilot channel has been on the grey zone list for a predetermined period of time (see paragraph 0012, lines 1-15 and paragraph 0039, lines 1-28).

5. Claims 8-9, 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cooper, U.S. Publication Number 2004/0203745 A1 (hereinafter Cooper)** as applied to claims 1 and 16 above, and further in view of **New et al., U.S. Patent Number 6,516,188 (hereinafter New)**.

Regarding claims 8 and 9, Cooper teaches all the limitations of claim 1. Cooper, however fails to explicitly teach a method, further comprising: starting an initial scan timer before scanning any channels in the channel scan list and performing an initial acquisition scan in response to the initial scan timer expiring and failing to acquire the other channel having at least the quality indicator greater than or equal to the predetermined threshold value.

New, however, teaches a method for acquiring emergency service in a mobile radio communication system, wherein, if an attempt to acquire normal non-emergency services fails and the user needs to originate an emergency call, the present invention scans an emergency scan list containing one or more candidate mobile radio communication systems and attempts to acquire emergency service from one of these systems (see col. 1, lines 50-62, col. 4, lines 24-49 and Fig. 3; steps 42-56). One of ordinary skill in the art further recognizes that it is obvious to implement an initial scan timer in a mobile station to acquire channels and the scan timer function can sometimes be a function of the microprocessor of the mobile station.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with New to include a method, further comprising: starting an initial scan timer before scanning any channels in the channel scan list and performing an initial acquisition scan in response to the initial scan timer expiring and failing to acquire the other channel having at least the quality indicator greater than or equal to the predetermined threshold value to provide a means to acquire emergency service in the various coverage areas in a mobile radio communication system.

Regarding claims 17 and 22, Cooper teaches all the limitations of claim 16. Cooper, however, fails to explicitly teach a method, further comprising performing an initial acquisition scan in response to failing to acquire another communication system and performing an initial acquisition scan after terminating a telephone call originated before acquiring the other communication system.

New, however, teaches a method for acquiring emergency service in a mobile radio communication system, wherein, if an attempt to acquire normal non-emergency services fails and the user needs to originate an emergency call, the present invention scans an emergency scan list containing one or more candidate mobile radio communication systems and attempts to acquire emergency service from one of these systems (see col. 1, lines 50-62, col. 4, lines 24-49 and Fig. 3; steps 42-56).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with New to include a method, further comprising

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performing an initial acquisition scan in response to failing to acquire another communication system to provide a means to acquire emergency service in the various coverage areas in a mobile radio communication system.

6. Claims 7 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cooper, U.S. Publication Number 2004/0203745 A1 (hereinafter Cooper)** as applied to claims 1 and 23 above, and further in view of **Nizri et al., U.S. Publication Number 2002/0197992 A1 (hereinafter Nizri)**.

Regarding claim 7, Cooper teaches all the limitations of claim 1. Cooper, however fails to explicitly teach a method, further comprising: starting a hysteresis timer after receiving at least the quality indicator below the predetermined threshold value; receiving at least another quality indicator after the hysteresis timer expires and before scanning any channels in the channel scan list; and scanning any channels in the channel scan list in response to the at least other quality indicator being below the predetermined threshold value.

Nizri, however, teaches a method, wherein, a hysteresis timer and a search timer are implemented to acquire a new cell or system and preferably uses a hysteresis timer to prevent constant, rapid cycling which runs down the mobile station's battery (see paragraph 0143, lines 1-19 and paragraph 0207, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with Nizri to include a method, further comprising: starting a hysteresis timer after receiving at least the quality indicator below the predetermined threshold value; receiving at least another quality indicator after

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the hysteresis timer expires and before scanning any channels in the channel scan list; and scanning any channels in the channel scan list in response to the at least other quality indicator being below the predetermined threshold value to prevent constant, rapid cycling which runs down the mobile station's battery life.

Regarding claim 28, Cooper teaches all the limitations of claim 23.

Cooper, however, fails to explicitly teach a method, further comprising a timer to cause the scanning of any channels on the channel scan list in response to at least the quality indicator of the channel being below the predetermined threshold for a predetermined period of time.

Nizri, however, teaches a method, wherein, a hysteresis timer and a search timer are implemented to acquire a new cell or system and preferably using a hysteresis timer to prevent constant, rapid cycling which runs down the mobile station's battery (see paragraph 0143, lines 1-19 and paragraph 0207, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with Nizri to include a method, further comprising a timer to cause the scanning of any channels on the channel scan list in response to at least the quality indicator of the channel being below the predetermined threshold for a predetermined period of time to prevent constant, rapid cycling which runs down the mobile station's battery life.

Regarding claim 29, Cooper teaches all the limitations of claim 23.

Cooper, however, fails to explicitly teach a method, further comprising an initial

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scan timer to cause an initial acquisition scan in response to a failure to acquire another channel from the channel scan list after a selected period of time.

Nizri, however, teaches a method, wherein, a hysteresis timer and a search timer are implemented to acquire a new cell or system and preferably using a hysteresis timer to prevent constant, rapid cycling which runs down the mobile station's battery (see paragraph 0143, lines 1-19 and paragraph 0207, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cooper with Nizri to include a method, further comprising an initial scan timer to cause an initial acquisition scan in response to a failure to acquire another channel from the channel scan list after a selected period of time to prevent constant, rapid cycling which runs down the mobile station's battery life.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ahmed et al., U.S. Patent Number 6,782,261 discloses a wireless handoff management method and device.

Otting et al., U.S. Patent Number 6,771,960 discloses a method for a cellular radiotelephone to scan for service from adjacent cells.

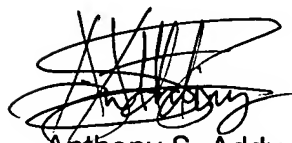
Cooper et al., U.S. Publication Number 2003/0148786 A1 discloses a method and apparatus for configurable selection and acquisition of a wireless communications system.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony S Addy whose telephone number is 703-305-8487. The examiner can normally be reached on Mon-Thur 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Anthony S. Addy
January 06, 2005

